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## ABSTRACT

This document contains an introduction to the Ohio Integrated Technical and Academic Competency (ITAC) and Specialization ITAC; an overview of the field of practical nursing; a list acknowledging professionals who helped develop the competency list; and the comprehensive list of the professional or occupational competencies deemed essential for graduates to be able to perform proficiently when they graduate from an Ohio specialization workforce development program for practical nursing. The introduction explains the following: (1) critical academic, employability, and information technology skills have been integrated throughout the list to support the technical skills; (2) the competency profile can be used as the basis for curriculum development in Ohio's secondary, adult, and postsecondary programs; and (3) the specialization competency profile is organized so that it can be clustered or grouped in a modular approach. The overview of the occupation describes general duties, some specific tasks, employment opportunities, length of program, type of program (classroom instruction and/or work experience), and types of certificates and/or degrees. The competencies are grouped under broader skills that are, in turn, categorized under these 20 major topics: practical nursing orientation; professional practices; workplace safety; infection control and risk management; medical terminology; first aid and medical emergencies; vital signs; nutrition; basic pharmacology; nursing process; nursing communication skills; nursing clinical procedures; anatomy, physiology, and pathology; health law and ethics; psychology of stress; psychology of human relations; professionalism; teamwork in the health care setting; daily work functions; and basic computer applications. (YLB)

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54.16.00.0	<b><u>Psychology of Human Relations</u></b>
54.17.00.0	<b><u>Professionalism</u></b>
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54.19.00.0	<b><u>Daily Work Functions</u></b>
54.20.00.0	<b><u>Basic Computer Applications</u></b>

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## Introduction to the Specialization ITAC

*Revised 2001*

The Ohio Integrated Technical and Academic Competency (ITAC) profiles are developed under the auspices of the Ohio Department of Education and the Ohio State Board of Education. They provide a broad-based educational response to Ohio's need for a skilled workforce. Each Specialization ITAC represents a profile of the professional or occupational competencies deemed essential for a graduate to perform proficiently when he or she graduates from the specialization workforce development programs in Business and Marketing, Industrial and Engineering Systems, Health Occupations, or Family and Consumer Sciences. The Specialization ITAC profile, in conjunction with the competencies identified in the Foundation and Clusters ITACs, provide a career pathway that can lead to employment or further education.

### Process and Intent

The integrated competency lists are the result of all encompassing research and review of existing competency profile lists and includes input from industry, labor, professional organizations, professional and industrial representation, and national standards for a specific industry/profession. Representatives from a broad cross-section of Ohio professional organizations, businesses/professions, industry, and labor played a critical role in identifying current and future knowledge and skills for the industry, and defining the vision and scope of the profession/industry. The instructional methods and teaching strategies are the responsibility of the local school system and/or instructor.

### Curriculum Applications Using the ITAC Competency Profiles

Each profile includes a comprehensive listing of occupational skill competencies that reflect the job opportunities and skills that are required to work in a specific profession/career pathway. Critical academic, employability and information technology skills have been integrated throughout the list to support the technical skills. These competency profiles will be used as the basis for curriculum development in Ohio's secondary, adult, and post-secondary programs. The specialization competency profiles are organized so that they can be clustered or grouped in a modular approach. Individual curriculum specialists can use the competencies profiles to develop instructional programs based on local needs as determined in conjunction with their local advisory committees. i.e., the specialization cluster academy approach. Final assessments will be designed to accompany each profile list and to accommodate student evaluation by modules.

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Ohio Department of Education  
Office of Career-Technical and Adult Education  
*2001 Revision*

<b>Practical Nursing</b>
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## Overview

### Practical Nursing

A career in practical nursing is both rewarding and challenging. Working as a practical nurse is for the person who enjoys working with and helping people. Successful students will have a good aptitude for both science and mathematics. The practical nurse must be able to work in a multi-task environment and enjoy interacting with patients as well as registered nurses, family, and physicians. Licensed practical nurses (LPNs), care for the sick, injured, convalescent, or disabled under the direction of physicians and registered nurses.

Most practical nurses provide basic bedside care. They take vital signs such as temperature, blood pressure, pulse, and respiration. The curriculum for the Practical Nurse program includes: classroom instruction via lectures, demonstrations, and discussions. Hospitals, medical centers, nursing home or care centers, or medical-surgical clinics often work cooperatively with schools to provide students with clinical practice and experience.

The LPN is responsible for accurate documentation of patient care. Practical nurses observe patients and report their progress and/or reactions to medications or treatments. They collect samples from patients for testing, assist with routine laboratory tests, feed patients, and record food and liquid intake and output. They help patients with bathing, dressing, providing personal hygiene care, keeping them comfortable, while being sensitive to their emotional well-being. In some health care settings, they may administer medications or assist with intravenous fluids.

In addition to providing routine bedside care, they may also help evaluate residents' needs, develop care plans, and supervise the care provided by others. In doctors' offices and clinics, they may also make appointments, keep records, or perform other office duties. LPNs who work in private homes may be asked to prepare meals and teach family members simple nursing tasks.

Some experienced LPNs will be assigned advanced level positions where they will be responsible for supervising nursing assistants and aides in a health care setting. Like other health-related positions, the LPN often advances to a higher career level with additional education.



## **54.00.00.0 Practical Nursing**

### **54.01.00.0 Practical Nurse Orientation**

#### **54.01.01.0 Define role of the practical nurse**

- 54.01.01.01 Survey history of the practical nurse
- 54.01.01.02 Identify scope of practical nurse responsibilities
- 54.01.01.03 Explore career opportunities for practical nurse

#### **54.01.02.0 Project professional image**

- 54.01.02.01 Define professionalism for practical nurse
- 54.01.02.02 Exhibit professional appearance
- 54.01.02.03 Exhibit professional manners
- 54.01.02.04 Project professional attitude
- 54.01.02.05 Identify individual's vital role in organization
- 54.01.02.06 Exhibit proper etiquette in professionally related situations

### **54.02.00.0 Professional Practices**

#### **54.02.01.0 Demonstrate professional responsibility and accountability in accordance with appropriate professional organizations**

- 54.02.01.01 Describe professional standards
- 54.02.01.02 Explain responsibility for accountability to professional standards
- 54.02.01.03 Identify responsibility to client(s) and employer(s)
- 54.02.01.04 Explain consequences of unprofessional behavior

#### **54.02.02.0 Practice legal and ethical behavior**

- 54.02.02.01 Differentiate between legal and ethical behavior
- 54.02.02.02 Explain terms, principles, and characteristics of legal and ethical behavior (e.g., loyalty, discretion, solicitation, competitor, supplier)
- 54.02.02.03 Explain state and federal rules and regulations governing the practice of the profession
- 54.02.02.04 Explain effects of unethical behavior of health care professionals
- 54.02.02.05 Describe ethical dilemmas in health care (e.g., death and dying, medical ethics committees)
- 54.02.02.06 Explain health care professional's responsibility in situations of patient abuse and neglect
- 54.02.02.07 Explain health care professional's responsibility in situations of coworker chemical addiction
- 54.02.02.08 Identify personal, societal, and global implications of substance use and abuse
- 54.02.02.09 Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice
- 54.02.02.10 Comply with standards of safe nursing practices as defined in Chapter 4723-4, Ohio Administrative Code, Standards of Safe Nursing Practice for RNs and LPNs
- 54.02.02.11 Explain process of certification/licensure of health professionals including responsibility to maintain current license

#### **54.02.03.0 Demonstrate delegation by LPN in accordance with Chapter 4723-13, Delegation Licensed Nurses, Ohio Administrative Code**

- 54.02.03.01 Identify delegation rules
- 54.02.03.02 Implement delegation rules

### **54.03.00.0 Workplace Safety**

#### **54.03.01.0 Maintain safe working environment**

- 54.03.01.01 Comply with Hazardous Materials Information Sheet (HMIS), Materials Safety Data Sheets (MSDS) and Occupational Safety and Health Administration (OSHA) regulations
- 54.03.01.02 Comply with all MSDS regulations regarding hazardous materials
- 54.03.01.03 Maintain clean work area
- 54.03.01.04 Comply with regulatory guidelines in handling, labeling, and disposal of solutions
- 54.03.01.05 Comply with workplace and personal safety rules and procedures
- 54.03.01.06 Comply with applicable electrical, mechanical, hydraulic, and pneumatic safety rules and procedures
- 54.03.01.07 Identify location of control panels, shut off valves, and fire extinguishers

#### **54.03.02.0 Demonstrate knowledge of ergonomics**

- 54.03.02.01 Define ergonomics
- 54.03.02.02 Define maximum permissible limit (MPL) and action limit (AL) for lifting
- 54.03.02.03 Define cumulative trauma disorder (CTD)
- 54.03.02.04 Minimize use of excessive muscle/physical force
- 54.03.02.05 Minimize repetitive tasks
- 54.03.02.06 Explain need for appropriate working heights of chairs, stools, footrests, workbenches, and equipment
- 54.03.02.07 Explain need for adequate lighting



## **54.04.00.0 Infection Control and Risk Management**

### **54.04.01.0 Comply with local, state, and federal regulations**

- 54.04.01.01 Explain universal/standard precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis, STDs)
- 54.04.01.02 Explain state and federal governmental roles in universal/standard precautions as outlined by the Center for Disease Control (CDC)
- 54.04.01.03 Comply with Environmental Protection Agency (EPA) regulations
- 54.04.01.04 Identify types of diseases that need to be reported
- 54.04.01.05 Use precautions to prevent contamination

### **54.04.02.0 Comply with environmental safety standards, accident prevention methods, and disaster plans**

- 54.04.02.01 Observe environmental safety rules of facility
- 54.04.02.02 Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
- 54.04.02.03 Demonstrate use of fire and safety equipment
- 54.04.02.04 Identify facility disaster plan
- 54.04.02.05 Demonstrate safety precautions for using equipment
- 54.04.02.06 Demonstrate safety precautions for using liquids and poisonous substances
- 54.04.02.07 Conduct safety inspection of client area
- 54.04.02.08 Correct/monitor safety hazards (e.g., spills, electrical)
- 54.04.02.09 Complete incident reports for accidents or safety infractions
- 54.04.02.10 Identify legal implications of accidents in health care facility
- 54.04.02.11 Explain potential sources of hazards (e.g., fire, electrical, chemical, biological, radioactive)
- 54.04.02.12 Follow procedures for dealing with exposure to hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
- 54.04.02.13 Label/store materials in accordance with employer's policies and/or manufacturer's guidelines
- 54.04.02.14 Follow manufacturer's instructions for safe operation of all equipment and instruments

### **54.04.03.0 Maintain personal safety and hygiene**

- 54.04.03.01 Use universal/standard precautions (i.e., personal protective equipment)
- 54.04.03.02 Demonstrate isolation techniques
- 54.04.03.03 Practice proper hygiene
- 54.04.03.04 Obtain immunization against communicable diseases
- 54.04.03.05 Complete incident reports as required (i.e., personal exposure)
- 54.04.03.06 Identify at-risk behaviors that promote the spread of communicable diseases
- 54.04.03.07 Differentiate fact from fallacy regarding the transmission of communicable diseases
- 54.04.03.08 Identify common causes of back injuries
- 54.04.03.09 Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

### **54.04.04.0 Maintain infection control of work area**

- 54.04.04.01 Identify modes of transmission of infection
- 54.04.04.02 Identify methods for preventing infection transmission
- 54.04.04.03 Differentiate between bacteriostatic and bacteriocidal
- 54.04.04.04 Identify disinfection techniques
- 54.04.04.05 Define "nosocomial infection"
- 54.04.04.06 Implement isolation procedures

### **54.04.05.0 Apply aseptic and sterilizing principles**

- 54.04.05.01 Follow manufacturer's instructions for safe operation of all equipment and instruments
- 54.04.05.02 Differentiate between medical and surgical aseptic techniques
- 54.04.05.03 Verify that date is current on sterilized equipment

### **54.04.06.0 Maintain patient safety**

- 54.04.06.01 Verify patient identity
- 54.04.06.02 Introduce self/title to patient
- 54.04.06.03 Redirect patient to safe activities (e.g., touch, diversion of attention, music)
- 54.04.06.04 Utilize gait belt
- 54.04.06.05 Assist patient to walk with assistive ambulation devices
- 54.04.06.06 Demonstrate safe usage of patient transport equipment
- 54.04.06.07 Demonstrate safe handling of patient medical equipment (e.g., IVs, catheters, oxygen tubing)
- 54.04.06.08 Identify proper bed height
- 54.04.06.09 Position patient maintaining proper body alignment, supporting body parts
- 54.04.06.10 Demonstrate patient transfer techniques
- 54.04.06.11 Identify safety needs of medicated patient
- 54.04.06.12 Demonstrate usage of side rails
- 54.04.06.13 Identify placement of patient call device
- 54.04.06.14 Orient patient to surroundings
- 54.04.06.15 Identify behaviors that may escalate to violence
- 54.04.06.16 Identify steps in managing at-risk patient

## **54.05.00.0 Medical Terminology**

### **54.05.01.0 Use common medical symbols, abbreviations, and acronyms**

- 54.05.01.01 Identify commonly used symbols (e.g., O<sub>2</sub>, H<sub>2</sub>O)
- 54.05.01.02 Write out full wording for commonly used acronyms
- 54.05.01.03 Write out full wording for commonly used abbreviations (e.g., bx = biopsy)
- 54.05.01.04 Spell medical terms correctly

### **54.05.02.0 Demonstrate knowledge of medical terminology**

- 54.05.02.01 Define basic prefixes and suffixes
- 54.05.02.02 Spell basic prefixes and suffixes
- 54.05.02.03 Pronounce basic prefixes and suffixes
- 54.05.02.04 Identify principal terms relating to the body as a whole
- 54.05.02.05 Define terminology of human physiology and anatomy

## **54.06.00.0 First Aid and Medical Emergencies**

### **54.06.01.0 Maintain/administer first aid and cardiopulmonary resuscitation (CPR) certification according to standards**

- 54.06.01.01 Acquire/maintain first aid certification
- 54.06.01.02 Acquire/maintain CPR certification
- 54.06.01.03 Update CPR certification
- 54.06.01.04 Administer CPR to infants and children
- 54.06.01.05 Administer CPR to adults
- 54.06.01.06 Administer care for obstructed airways for infants, children, and adults

### **54.06.02.0 Respond to medical emergencies**

- 54.06.02.01 Identify emergency situation
- 54.06.02.02 React to emergency per protocol
- 54.06.02.03 Identify patient
- 54.06.02.04 Perform head-to-toe patient assessment
- 54.06.02.05 Describe patient needs
- 54.06.02.06 Describe signs and symptoms of emergency situations
- 54.06.02.07 Identify basic emergency equipment

### **54.06.03.0 Perform first aid**

- 54.06.03.01 Assist with first aid for wounds or fractures
- 54.06.03.02 Administer first aid to control bleeding
- 54.06.03.03 Administer first aid for shock
- 54.06.03.04 Administer first aid for burn patient
- 54.06.03.05 Assist with first aid for poisoned patient
- 54.06.03.06 Assist with choking patient
- 54.06.03.07 Assist with patient having seizure
- 54.06.03.08 Assist with fainting patient

## **54.07.00.0 Vital Signs**

### **54.07.01.0 Measure Temperature**

- 54.07.01.01 Follow safety and aseptic techniques to measure temperature
- 54.07.01.02 Identify normal range and average temperature for oral, axillary, tympanic, and rectal temperatures
- 54.07.01.03 Identify factors that may affect temperature
- 54.07.01.04 Select route to measure temperature
- 54.07.01.05 Demonstrate use of different types of thermometers
- 54.07.01.06 Record temperature measurements
- 54.07.01.07 Report abnormal temperature measurements
- 54.07.01.08 Maintain thermometer(s)

### **54.07.02.0 Measure pulse**

- 54.07.02.01 Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
- 54.07.02.02 Identify normal pulse range for different age groups
- 54.07.02.03 Identify factors that may affect pulse
- 54.07.02.04 Identify variations from normal pulse rate that should be reported
- 54.07.02.05 Record pulse

### **54.07.03.0 Measure ventilation**

- 54.07.03.01 Measure rate, depth, and rhythm of respiration
- 54.07.03.02 Identify normal respiratory rate for different age groups
- 54.07.03.03 Report signs of compromised respiration
- 54.07.03.04 Identify factors that may affect respiration
- 54.07.03.05 Record respiration



**54.07.04.0 Measure blood pressure**

- 54.07.04.01 Identify etiology of hypertension
- 54.07.04.02 Identify normal range of blood pressure for different age groups
- 54.07.04.03 Identify factors that affect blood pressure
- 54.07.04.04 Demonstrate use of sphygmomanometer (i.e., aneroid, mercurial, electronic)
- 54.07.04.05 Demonstrate procedure to measure blood pressure
- 54.07.04.06 Demonstrate location of stethoscope for proper blood pressure reading
- 54.07.04.07 Record blood pressure

**54.07.05.0 Obtain physical measurements**

- 54.07.05.01 Measure adult or child height and weight
- 54.07.05.02 Measure adult or child chest and waist expansion
- 54.07.05.03 Measure infant height and weight
- 54.07.05.04 Measure infant head and chest circumference
- 54.07.05.05 Measure auditory status
- 54.07.05.06 Measure visual status (e.g., eye chart)
- 54.07.05.07 Identify color blindness
- 54.07.05.08 Record all results

**54.08.00.0 Nutrition****54.08.01.0 Identify fundamentals of nutrition**

- 54.08.01.01 Identify food nutrients
- 54.08.01.02 Explain role of nutrients to body functions
- 54.08.01.03 Develop a balanced diet using the food pyramid
- 54.08.01.04 Explain regional, cultural, and ethnic food patterns
- 54.08.01.05 List factors to consider when purchasing food
- 54.08.01.06 Identify component of a balanced diet across the lifespan (e.g., United State Department of Agriculture [USDA] food pyramid)
- 54.08.01.07 List factors to consider when storing food
- 54.08.01.08 Identify methods of food preparation
- 54.08.01.09 Instruct patient in nutrition principles

**54.08.02.0 Identify nutritional needs related to special conditions and/or**

- 54.08.02.01 Describe common diets related to dietary alternatives (e.g., pureed, mechanical-soft)
- 54.08.02.02 Describe special diets (e.g., exchange diet)
- 54.08.02.03 Identify risks of non-compliance with dietary restrictions
- 54.08.02.04 Educate patient regarding dietary hazards (e.g., caffeine, fats)

**54.08.03.0 Draw correlation between diet and exercise**

- 54.08.03.01 Identify methods of exercise
- 54.08.03.02 Explain effect of exercise and nutrition on energy level
- 54.08.03.03 Identify weight-related issues

**54.08.04.0 Identify advantages and disadvantages of alternative methods of**

- 54.08.04.01 Identify effects of tube feedings
- 54.08.04.02 Identify effects of intravenous, hyperalimentation, and lipids

**54.09.00.0 Basic Pharmacology****54.09.01.0 Maintain supply of medications, as applicable to the profession**

- 54.09.01.01 Maintain accurate narcotic count
- 54.09.01.02 Store medications properly
- 54.09.01.03 Dispose of medications in accordance with employer's policies and government regulations

**54.09.02.0 Calculate dosage according to authorized health care**

- 54.09.02.01 Verify accuracy of medical orders
- 54.09.02.02 Use approved drug reference resource (e.g., Physician's Desk Reference [PDR])
- 54.09.02.03 Transcribe medication order
- 54.09.02.04 Calculate dosage accurately
- 54.09.02.05 Verify type of intravenous solution
- 54.09.02.06 Monitor Intravenous rate of flow

**54.09.03.0 Instruct patients on use of medications**

- 54.09.03.01 Provide verbal and/or written information regarding medication
- 54.09.03.02 Explain use of medications (e.g., identify side effects, adverse effects, interactions)

**54.09.04.0 Administer medications according to authorized health care provider orders as applicable to the profession**

- 54.09.04.01 Follow the six rights of medication administration (i.e., right patient, medication, time, route, dosage, and documentation)
- 54.09.04.02 Verify patient allergies
- 54.09.04.03 Use reference materials
- 54.09.04.04 Prepare medications accurately
- 54.09.04.05 Document medication administration
- 54.09.04.06 Document patient response to medications

**54.10.00.0 The Nursing Process**

**54.10.01.0 Perform initial patient assessment**

- 54.10.01.01 Provide privacy and patient confidentiality
- 54.10.01.02 Record medical/health history (e.g., allergies, current medications)
- 54.10.01.03 Identify bio-psycho-social condition
- 54.10.01.04 Validate data with patient or responsible party
- 54.10.01.05 Compare patient's condition to norms
- 54.10.01.06 Communicate abnormal findings to appropriate health care provider

**54.10.02.0 Collect ongoing patient data**

- 54.10.02.01 Observe psychological and physical behavior
- 54.10.02.02 Assess ability to perform activities for daily living (ADLs)
- 54.10.02.03 Observe interaction of patient and/or significant other/responsible party
- 54.10.02.04 Observe patient response to care
- 54.10.02.05 Document additional assessment findings

**54.10.03.0 Formulate patient plan of care**

- 54.10.03.01 Participate in the development of a plan of care
- 54.10.03.02 Assist in developing a teaching plan and discharge plan

**54.10.04.0 Implement safe, effective, comforting patient centered nursing care across the life span**

- 54.10.04.01 Implement plan of care as developed
- 54.10.04.02 Describe nursing interventions and outcomes

**54.10.05.0 Evaluate outcomes of nursing care**

- 54.10.05.01 Describe/document effect of nursing intervention(s)
- 54.10.05.02 Verify patient and/or significant other compliance with planned care
- 54.10.05.03 Identify outcomes met
- 54.10.05.04 Report findings to appropriate health care provider

**54.11.00.0 Nursing Communication Skills**

**54.11.01.0 Demonstrate effective communications/interactions skills**

- 54.11.01.01 Identify methods to obtain information through communications
- 54.11.01.02 Describe factors that facilitate or hinder communications
- 54.11.01.03 Apply principles of therapeutic communication
- 54.11.01.04 Practice confidentiality

**54.11.02.0 Develop teaching plan for patient/significant other/responsible**

- 54.11.02.01 Identify teaching needs of patient/significant other/responsible party
- 54.11.02.02 Develop the teaching plan based on need
- 54.11.02.03 Implement teaching plan

**54.11.03.0 Evaluate effectiveness of education plan**

- 54.11.03.01 Identify change in patient behavior
- 54.11.03.02 Reinforce education if needed

**54.12.00.0 Nursing Clinical Procedures**

**54.12.01.0 Perform nursing procedures following legal guidelines**

- 54.12.01.01 Verify order, as appropriate
- 54.12.01.02 Read procedure manual

**54.12.02.0 Perform nursing skills**

- 54.12.02.01 Perform or delegate skills
- 54.12.02.02 Evaluate basic care skills provided
- 54.12.02.03 Demonstrate safe, effective equipment operation in health care settings

## **54.13.00.0 Anatomy, Physiology, and Pathology**

### **54.13.01.0 Demonstrate general knowledge of basic chemistry**

- 54.13.01.01 Identify elements on periodic table
- 54.13.01.02 Identify simple chemical formulas
- 54.13.01.03 Explain the structure of atoms and molecules
- 54.13.01.04 Define synthesis, decomposition, and exchange reactions
- 54.13.01.05 Define diffusion, filtration, and osmosis
- 54.13.01.06 Differentiate between acids and bases

### **54.13.02.0 Demonstrate general knowledge of the human body**

- 54.13.02.01 Explain the relationship between human anatomy and physiology
- 54.13.02.02 Describe the anatomical position
- 54.13.02.03 Identify body directions, planes, and cavities
- 54.13.02.04 Name major systems, their functions, and components
- 54.13.02.05 Define cell composition, shape and size
- 54.13.02.06 Identify basic life processes of cell division and transportation
- 54.13.02.07 Identify four major tissue types, their function and subtypes
- 54.13.02.08 Differentiate between benign and malignant
- 54.13.02.09 Describe effect of aging across the lifespan

### **54.13.03.0 Demonstrate knowledge of integumentary system**

- 54.13.03.01 Identify functions of the integumentary system
- 54.13.03.02 Describe skin receptor responses (e.g., to touch/pressure, temperature, and pain)
- 54.13.03.03 Name layers of the skin
- 54.13.03.04 Identify structures associated with skin, hair, hair follicle, sebaceous glands, and sudoriferous glands
- 54.13.03.05 Identify different types of body membranes
- 54.13.03.06 Identify common skin disorders

### **54.13.04.0 Demonstrate knowledge of skeletal system**

- 54.13.04.01 Identify functions of skeletal system
- 54.13.04.02 List the classifications of bone types
- 54.13.04.03 Describe composition of bone
- 54.13.04.04 Define function of bone marrow
- 54.13.04.05 Explain process of bone formation and growth
- 54.13.04.06 Identify major bones of the human skeleton
- 54.13.04.07 Name types of bone markings and their associated terms
- 54.13.04.08 Describe structure of various joints
- 54.13.04.09 Name categories of joints
- 54.13.04.10 Define type/range of motion for different joints
- 54.13.04.11 Identify types of fractures
- 54.13.04.12 Identify methods of correction for fractures
- 54.13.04.13 Identify various disorders and injuries of bones and joints

### **54.13.05.0 Demonstrate knowledge of muscular system**

- 54.13.05.01 Identify major muscles of the human body
- 54.13.05.02 Identify origin, insertion, and function of muscles
- 54.13.05.03 Identify types of muscle tissue
- 54.13.05.04 Describe muscle contraction
- 54.13.05.05 Define parts of a muscle and muscle types
- 54.13.05.06 Define muscle tone, isotonic, and isometric contractions
- 54.13.05.07 Name types of movement produced by skeletal-muscle contractions
- 54.13.05.08 Describe diseases, disorders, abnormal conditions, and injuries of the muscles

### **54.13.06.0 Demonstrate knowledge of nervous system**

- 54.13.06.01 Identify main parts of the nervous system
- 54.13.06.02 Describe general functions of the nervous system
- 54.13.06.03 Name principal cell types that compose the nervous system
- 54.13.06.04 Describe neuron, including function and various types
- 54.13.06.05 Describe neuralgia, including function and various types
- 54.13.06.06 Define ganglia, nuclei, tracts, and nerves, noting differences
- 54.13.06.07 Describe transmission of a nerve impulse
- 54.13.06.08 Describe the anatomy and physiology of pain
- 54.13.06.09 Describe structures and functions of various parts of the brain and spinal cord
- 54.13.06.10 Explain functions/divisions of autonomic nervous system
- 54.13.06.11 Describe diseases, disorders, and injuries of the nervous system

### **54.13.07.0 Demonstrate knowledge of circulatory/ cardiovascular system**

- 54.13.07.01 Identify structures and function of the heart
- 54.13.07.02 Trace pathway of blood through the heart
- 54.13.07.03 Describe route of blood circulation throughout the body
- 54.13.07.04 Define blood pressure, pulse, systole, diastole, and cardiac cycle
- 54.13.07.05 Describe pathway of impulses through the heart's conduction system
- 54.13.07.06 List factors that influence heart rate
- 54.13.07.07 Identify structure and function of blood vessels (i.e., arteries, veins, and capillaries)

- 54.13.07.08 Identify major blood vessels
- 54.13.07.09 Identify structures involved in fetal circulation
- 54.13.07.10 Identify pulse points
- 54.13.07.11 Identify major blood components
- 54.13.07.12 Identify blood types
- 54.13.07.13 Describe blood-clotting process
- 54.13.07.14 Describe diseases and disorders of the circulatory/cardiovascular system
- 54.13.08.0 Demonstrate knowledge of lymphatic system**
  - 54.13.08.01 Name structures of the lymphatic system
  - 54.13.08.02 Identify functions of the lymphatic system
  - 54.13.08.03 Explain relationship between the lymphatic system and the cardiovascular system
  - 54.13.08.04 Explain body's immune responses
  - 54.13.08.05 Define antigens and antibodies and antibody reactions
  - 54.13.08.06 Differentiate between active and passive immunity
  - 54.13.08.07 Explain differences among the five major classes of antibodies
  - 54.13.08.08 Describe common immune deficiencies, allergies, and autoimmune disorders
  - 54.13.08.09 Describe diseases and disorders of the lymphatic system
- 54.13.09.0 Demonstrate knowledge of respiratory system**
  - 54.13.09.01 Identify major respiratory system organs and function of each
  - 54.13.09.02 Describe function of major respiratory system organs and structures
  - 54.13.09.03 Define external and internal respiration, ventilation, expiration, and inspiration
  - 54.13.09.04 Describe process of gas exchange in the lungs and the tissues
  - 54.13.09.05 Explain role of respiratory muscles in breathing
  - 54.13.09.06 Identify brain areas involved in the control of respiration
  - 54.13.09.07 Explain respiratory volumes and capacities
  - 54.13.09.08 Describe diseases and disorders and injuries of the respiratory system
- 54.13.10.0 Demonstrate knowledge of digestive system**
  - 54.13.10.01 Identify structures and functions of the digestive system
  - 54.13.10.02 Describe mechanisms of mastication, swallowing, vomiting, and defecation
  - 54.13.10.03 Define anabolism and catabolism
  - 54.13.10.04 Define basal metabolic rate and total metabolic rate
  - 54.13.10.05 Describe diseases and disorders of the digestive system
- 54.13.11.0 Demonstrate knowledge of endocrine system**
  - 54.13.11.01 Differentiate between endocrine and exocrine glands
  - 54.13.11.02 Identify major endocrine glands and hormones produced by each
  - 54.13.11.03 Explain response of body systems to hormones
  - 54.13.11.04 Describe diseases and disorders of the endocrine glands
- 54.13.12.0 Demonstrate knowledge of urinary system**
  - 54.13.12.01 Identify structure and functions of the urinary system
  - 54.13.12.02 Explain functioning of the urinary system
  - 54.13.12.03 Identify nitrogenous waste found in urine
  - 54.13.12.04 Explain how water and electrolyte balance is maintained by the body
  - 54.13.12.05 Describe urination process
  - 54.13.12.06 Describe diseases and disorders of the urinary system
- 54.13.13.0 Demonstrate knowledge of reproductive system**
  - 54.13.13.01 Identify structures and functions of the reproductive system
  - 54.13.13.02 Identify major organs of the reproductive system
  - 54.13.13.03 Describe phases of the menstrual cycle
  - 54.13.13.04 Identify stages of fetal development
  - 54.13.13.05 Explain physiology of childbirth (e.g., prenatal, labor and delivery, postpartum)
  - 54.13.13.06 Describe diseases and disorders of the reproductive system
- 54.13.14.0 Demonstrate knowledge of senses**
  - 54.13.14.01 Identify major structures and functions of sight, hearing, smell, taste, and touch
  - 54.13.14.02 Describe diseases and disorders and injuries of the senses

## **54.14.00.0 Health Law and Ethics**

### **54.14.01.0 Describe legal ramifications of misconduct**

- 54.14.01.01 Explain terms, principles, and characteristics of legal and ethical behavior
- 54.14.01.02 Explain legal and ethical ramifications of breaching patient confidentiality

**54.14.02.0 Practice discretion regarding patient information**

- 54.14.02.01 Identify components of Patient Bill of Rights
- 54.14.02.02 Communicate patient's rights and responsibilities
- 54.14.02.03 Identify reasons for sharing patient information and appropriate persons to whom information can be released
- 54.14.02.04 Maintain confidentiality
- 54.14.02.05 Explain Anatomical Gift Act
- 54.14.02.06 Explain advance directives and living will
- 54.14.02.07 Explain informed consent
- 54.14.02.08 Identify reasons for termination of patient services
- 54.14.02.09 Explain consequences of noncompliance with physician's recommendations
- 54.14.02.10 Describe importance of proper patient sample identification (e.g., sputum, urine, blood)

**54.14.03.0 Practice personal professional protocol with medical community**

- 54.14.03.01 Explain process of certification/licensure of health professionals
- 54.14.03.02 Maintain integrity of personal files
- 54.14.03.03 Explain statute of limitation for records and reports
- 54.14.03.04 Identify ownership of medical records
- 54.14.03.05 Maintain procedures for legal access to patient and/or records
- 54.14.03.06 Investigate professional liability coverage options

**54.15.00.0 Psychology of Stress****54.15.01.0 Analyze factors that influence a patient's response to stress**

- 54.15.01.01 Describe the physiology of stress
- 54.15.01.02 Differentiate between stress and stressors
- 54.15.01.03 Explain how an individual's perception of stress influences the response to stressors
- 54.15.01.04 Explain how internal and external factors influence one's response to stress
- 54.15.01.05 Identify coping mechanisms used to decrease stress
- 54.15.01.06 Identify biological adaptive responses to stress

**54.15.02.0 Analyze physiological response to stress**

- 54.15.02.01 Describe the affects of stress on the body systems
- 54.15.02.02 Explain how internal and external factors relate to the physiological stress response
- 54.15.02.03 Differentiate between immune systems response to stressors in children Vs adults
- 54.15.02.04 Explain how stress relates to activation of disease

**54.15.03.0 Analyze psychological response to stress**

- 54.15.03.01 Identify psychological stressors
- 54.15.03.02 Describe relationship between personality types and the stress response
- 54.15.03.03 Differentiate between cognitive and behavioral coping mechanisms
- 54.15.03.04 Identify a patient's ability to cope with stress based on individual and stressor characteristics
- 54.15.03.05 Identify types of coping strategies
- 54.15.03.06 Identify selected defense mechanisms
- 54.15.03.07 Summarize ineffective coping behaviors

**54.15.04.0 Provide care for a patient with an ineffective coping response**

- 54.15.04.01 Identify psychological responses to stress in a patient
- 54.15.04.02 Demonstrate sensitivity for patient's feelings when providing patient care
- 54.15.04.03 Implement strategies to assist in stress reduction
- 54.15.04.04 Evaluate selected patient interventions
- 54.15.04.05 Suggest alternative measures for intervention if necessary

**54.16.00.0 Psychology of Human Relations****54.16.01.0 Explain human growth and development**

- 54.16.01.01 Describe characteristics of growth and development from conception to birth
- 54.16.01.02 Describe characteristics of growth and development from birth through preschool
- 54.16.01.03 Describe characteristics of growth and development from school age through adolescence
- 54.16.01.04 Describe characteristics of growth and development of the adult through the life span

**54.16.02.0 Demonstrate appropriate communication techniques**

- 54.16.02.01 Identify components of nurse-patient relationship
- 54.16.02.02 Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
- 54.16.02.03 Treat patient with respect and dignity
- 54.16.02.04 Identify assertive, aggressive, and passive responses
- 54.16.02.05 Differentiate between acceptable and unacceptable touching
- 54.16.02.06 Identify barriers to communication

#### **54.16.03.0 Establish rapport**

- 54.16.03.01 Describe proper manner for greeting a patient
- 54.16.03.02 Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
- 54.16.03.03 Respond to verbal and nonverbal communication
- 54.16.03.04 Serve as liaison between physician, patient, and others
- 54.16.03.05 Verify patient's understanding of communication
- 54.16.03.06 Translate medical terms into language patient can understand
- 54.16.03.07 Interpret patient's reaction to illness and disability
- 54.16.03.08 Identify individual, cultural, and socioeconomic differences
- 54.16.03.09 Identify methods to communicate with patients or responsible party with sensory disorders
- 54.16.03.10 Support patient/responsible party during the grief process
- 54.16.03.11 Orient patient to policies, facilities, and staff
- 54.16.03.12 Respond to patient/responsible party in a therapeutic manner
- 54.16.03.13 Treat patient with empathy and be nonjudgmental
- 54.16.03.14 Support patient's right to make decisions regarding care
- 54.16.03.15 Support patient/responsible party's verbalization of feelings

#### **54.16.04.0 Follow established procedures for communication and**

- 54.16.04.01 Communicate reports of patient status
- 54.16.04.02 Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
- 54.16.04.03 Proofread communications
- 54.16.04.04 Initiate medical records according to institutional policies
- 54.16.04.05 Document/maintain medical records according to institutional policies
- 54.16.04.06 Interpret patient-related documents
- 54.16.04.07 Participate in team conferences
- 54.16.04.08 Report change in patient status
- 54.16.04.09 Clarify physician's orders
- 54.16.04.10 Identify various charting methods
- 54.16.04.11 Respond to request for service
- 54.16.04.12 Respond to request from patient's funding source
- 54.16.04.13 Notify patient or responsible party of changes required in treatment plan
- 54.16.04.14 Write instructions for use of patient equipment (e.g., orthotics, prosthesis)
- 54.16.04.15 Write instructions for a home therapy program
- 54.16.04.16 Witness a consent form

#### **54.16.05.0 Document patient progress**

- 54.16.05.01 Record current treatment and patient response
- 54.16.05.02 Use correct grammar, spelling, and approved abbreviations
- 54.16.05.03 Secure appropriate signatures
- 54.16.05.04 Write legibly

### **54.17.00.0 Professionalism**

#### **54.17.01.0 Formulate individual and professional goals**

- 54.17.01.01 Set flexible, realistic, and measurable goals
- 54.17.01.02 Identify potential barriers to achieving goals
- 54.17.01.03 Identify strategies for addressing barriers to goal achievement
- 54.17.01.04 Identify long-term goals and short-term goals
- 54.17.01.05 Prioritize goals
- 54.17.01.06 Evaluate/adjust goals
- 54.17.01.07 Obtain support for goals

#### **54.17.02.0 Support community well-being**

- 54.17.02.01 Identify environmental, educational, and social issues
- 54.17.02.02 Participate in social and/or community/industry activities

#### **54.17.03.0 Achieve organizational goals**

- 54.17.03.01 Demonstrate knowledge of organization's mission/goals
- 54.17.03.02 Evaluate personal goals in relation to organizational goals
- 54.17.03.03 Monitor progress by evaluating feedback
- 54.17.03.04 List responsibilities in relation to organizational goals
- 54.17.03.05 Accomplish assigned tasks
- 54.17.03.06 Exercise responsibility in relation to organizational goals
- 54.17.03.07 Set appropriate personal performance standards
- 54.17.03.08 Communicate goals with supervisor and peers
- 54.17.03.09 Demonstrate knowledge of services
- 54.17.03.10 Promote organizational image and mission



**54.17.04.0 Demonstrate positive relations in the workplace**

- 54.17.04.01 Recognize diversity in the workplace (e.g., cultural, educational level, socio-economic differences, individual exceptionalities)
- 54.17.04.02 Identify personality types
- 54.17.04.03 Identify methods of working with various personalities
- 54.17.04.04 Identify various management styles
- 54.17.04.05 Participate in collaborative efforts directed toward meeting organizational goals
- 54.17.04.06 Accept constructive criticism
- 54.17.04.07 Give constructive feedback
- 54.17.04.08 Adapt to changes in workplace

**54.17.05.0 Manage stressful situations**

- 54.17.05.01 Identify personal and professional factors contributing to stress
- 54.17.05.02 Describe physical and emotional responses to stress
- 54.17.05.03 Evaluate positive and negative effects of stress
- 54.17.05.04 Implement strategies to manage stress
- 54.17.05.05 Develop/maintain support systems
- 54.17.05.06 Analyze effects of family on work and work on family

**54.17.06.0 Apply lifelong learning skills**

- 54.17.06.01 Define lifelong learning
- 54.17.06.02 Identify factors that cause need for lifelong learning
- 54.17.06.03 Describe importance of flexibility and adaptability
- 54.17.06.04 Evaluate need for continuing education/training

**54.17.07.0 Manage professional development**

- 54.17.07.01 Identify career opportunities
- 54.17.07.02 Participate in continuing education/training opportunities (e.g., journals, seminars/workshops, professional organizations)
- 54.17.07.03 Identify continuing education requirements for license renewal
- 54.17.07.04 Maintain personal/professional support system
- 54.17.07.05 Build professional network
- 54.17.07.06 Develop communication skills
- 54.17.07.07 Develop leadership and management skills
- 54.17.07.08 Develop critical thinking skills
- 54.17.07.09 Develop problem-solving skills

**54.18.00.0 Teamwork in the health care setting****54.18.01.0 Demonstrate knowledge of teamwork**

- 54.18.01.01 Define responsibility and accountability within the team
- 54.18.01.02 Identify appropriate situations for using teams
- 54.18.01.03 Define team structures (e.g., cross-functional, quality improvement, task force, quality circles)
- 54.18.01.04 Identify team-building concepts
- 54.18.01.05 Describe characteristics and dynamics of teams
- 54.18.01.06 Identify characteristics of effective team leaders and members
- 54.18.01.07 Identify scope of practice for each licensed team member

**54.18.02.0 Identify conditions essential to teamwork**

- 54.18.02.01 Explain influence of culture on teamwork
- 54.18.02.02 Identify responsibility of each team members
- 54.18.02.03 Identify methods of involving each member of a team
- 54.18.02.04 Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
- 54.18.02.05 Explain purpose of facilitators
- 54.18.02.06 Identify problem-solving techniques
- 54.18.02.07 Define consensus, reward/recognition system, mutual respect, and equality

**54.19.00.0 Daily Work Functions****54.19.01.0 Maintain work flow**

- 54.19.01.01 Organize work
- 54.19.01.02 Prioritize work
- 54.19.01.03 Apply time-management techniques
- 54.19.01.04 Complete assigned tasks in a timely manner
- 54.19.01.05 Work cooperatively with team members

**54.19.02.0 Perform telecommunications operations**

- 54.19.02.01 Display telephone etiquette
- 54.19.02.02 Operate equipment (i.e., facsimile [FAX] modem, electronic mail, voice mail systems, Internet systems)
- 54.19.02.03 Use telephone system according to facility protocol

**54.20.00.0 Basic Computer Applications**

**54.20.01.0 Demonstrate basic computer literacy**

- 54.20.01.01 Keyboard proficiently
- 54.20.01.02 Manipulate files (e.g. copy, rename, delete)

**54.20.02.0 Operate computer hardware**

- 54.20.02.01 Identify hardware and its use
- 54.20.02.02 Demonstrate basic care of hardware

**54.20.03.0 Utilize password security systems**

- 54.20.03.01 Secure data using password system
- 54.20.03.02 Retrieve data



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